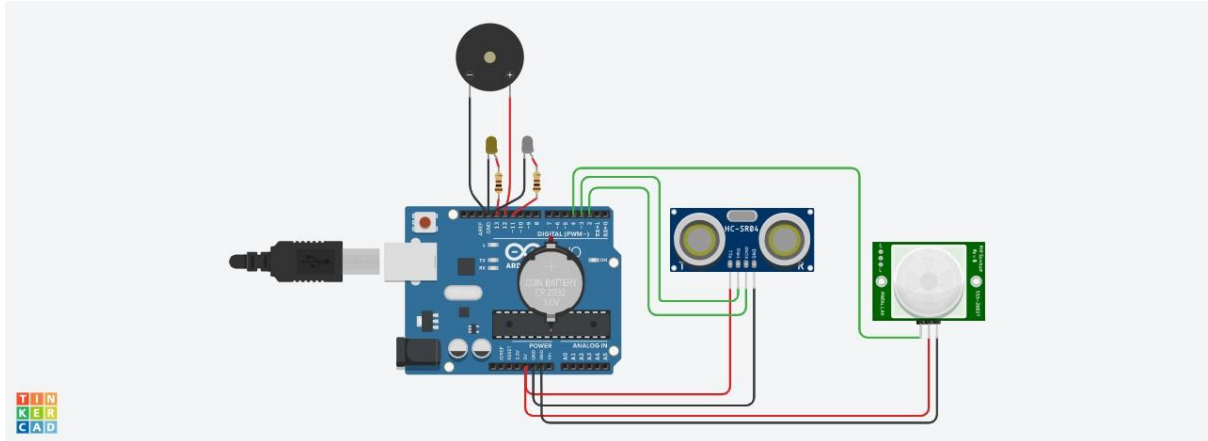


IBM ASSIGNMENT-1 HOME AUTOMATION

CIRCUIT DIAGRAM:



CODE:

```
void setup()
{
  pinMode(11, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(13, OUTPUT);
  pinMode(2, INPUT);
  pinMode(3, OUTPUT);
  pinMode(4, INPUT);
  Serial.begin(1000);
}

void loop()
{
  int a=digitalRead(4);
  //Reads the motion in the room.
  //-----
  if(a)
  {
```

```

digitalWrite(11,HIGH);
//if moment is detected the light will glow for 5 minutes.
delay(5000);//5 minutes is taken as 5 seconds.
Serial.println("\n\nmotion in the room,lights is ON");
}
else
{
digitalWrite(11,LOW);
//if there is no motion after 5 minutes the light turns off .
Serial.println("\n\nNo motion,light is OFF");
}
//-----
digitalWrite(3,LOW);//no gen. of pulse of sound
digitalWrite(3,HIGH);//gen, of pulse of sound
delayMicroseconds(5);//10ms of sound pulse.
digitalWrite(3,LOW);//ultrasonic sensor is off.
float p=pulseIn(2,HIGH);//receives the reflected signal.
float d=(p*0.0343)/2;//calculate distance of the water level.;
if(d<50)
{
tone(12,500);//the water tank is full is indicated
//using a buzzer.
Serial.println("\n\nThe Water Tank is full");
}
else if (d>250)
{
noTone(12);
digitalWrite(13,HIGH);//if the water tank is empty,yellow
//light gets on indicating tank is empty.

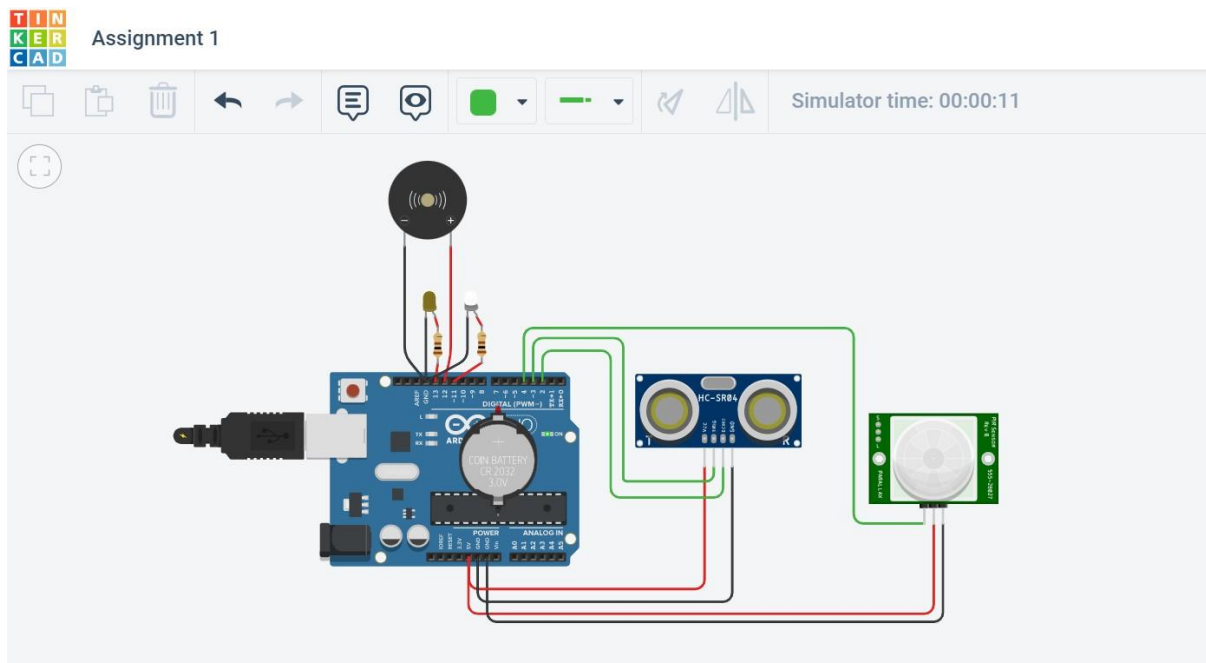
```

```
Serial.println("\n\nThe Water Tank is empty");  
}  
else  
{  
noTone(12);  
digitalWrite(13,LOW);//the water level is normal.  
Serial.println("\n\nThere is Water in the water Tank");  
}  
}
```

TINKERCAD LINK:

<https://www.tinkercad.com/things/fRqDDMudAqp-assignment-1/editel?sharecode=9EKIMaKBkcvSSyoZORscH5ohvNBUAFUD37NUus87H-c>

OUTPUT:



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